AMENDMENTS TO THE CLAIMS

Applicants submit below a complete listing of the current claims, including marked-up claims with insertions indicated by underlining and deletions indicated by strikeouts and/or double bracketing. This listing of claims replaces all prior versions, and listings of claims in the application.

1. (Currently amended) An integrated lighting module comprising:

(a) one or more light-emitting elements for generating illumination;

(b) an optical system optically coupled to the one or more light-emitting elements for manipulating the illumination;

(c) a feedback system for collecting information representative of operational characteristics of the one or more light-emitting elements, the feedback system including:

(i) one or more optical sensors configured to generate one or more optical feedback signals representative of the illumination generated by the one or more light-emitting elements, and

(ii) one or more thermal sensors configured to generate one or more thermal feedback signals representative of heat generated by the one or more light-emitting elements;

(d) a passive thermal management system in thermal contact with the one or more light-emitting elements for conducting heat away from the one or more light-emitting elements, the thermal management system including only passive thermal transfer elements; and

(e) a drive and control system for receiving the optical and thermal feedback signals from the feedback system, and controlling the one or more light-emitting elements based on predetermined control parameters and the optical and thermal feedback signals.

2. (Currently amended) The integrated lighting module according to claim 1, wherein the thermal management system ~~is passive and~~ includes one or more heat pipes, each heat pipe having an evaporator end that is thermally coupled to the light-emitting elements.

3. (Previously presented) The integrated lighting module according to claim 2, wherein the evaporator ends of the one or more heat pipes are physically connected to one or more of the one or more light-emitting elements.

4. (Previously presented) The integrated lighting module according to claim 2, wherein the one or more light-emitting elements are mounted on a thermally conductive substrate and wherein the evaporator ends of the one or more heat pipes are in direct thermal contact with the thermally conductive substrate.

5. (Previously presented) The integrated lighting module according to claim 4, wherein the evaporator end of at least one of the one or more heat pipes is integrated into the thermally conductive substrate.

6. (Cancelled).

7. (Previously presented) The integrated lighting module according to claim 2, wherein the thermal management system further comprises one or more heat sinks thermally connected to the one or more heat pipes, said one or more heat sinks for dissipating the heat transferred thereto by the one or more heat pipes.

8. (Canceled)

9. (Withdrawn) The integrated lighting module according to claim 1, wherein the feedback system includes one or more temperature sensors configured to generate signals representative of operational temperature of the one or more light-emitting elements.

10. (Withdrawn) The integrated lighting module according to claim 1, wherein the feedback system further comprises a temperature sensor configured to generate signals representative of operational temperature of the one or more optical sensors.

11. (Withdrawn) The integrated lighting module according to claim 1, wherein one or more of the one or more optical sensors are further configured to generate signals representative of ambient light conditions.

12. (Withdrawn) The integrated lighting module according to claim 1, wherein the one or more optical sensors include a colour filter, said colour filter for limiting optical sensor response to a predetermined range of wavelengths.

13. (Withdrawn) The integrated lighting module according to claim 1, wherein the one or more optical sensors are interfaced with circuitry adapted to manipulate the signals generated by the one or more optical sensors, wherein manipulation of the signals includes one or more of signal conditioning, signal amplification, gain control and integration time control.

14. (Withdrawn) The integrated lighting module according to claim 1, wherein the one or more light-emitting elements are electrically connected for individual control thereof by the drive and control system.

15. (Withdrawn) The integrated lighting module according to claim 1, wherein the one or more light-emitting elements emit light having a colour selected from the group comprising: white, red, green, blue, cyan and amber.

16. (Withdrawn) The integrated lighting module according to claim 1, wherein the drive and control system digitally controls the one or more light-emitting elements using either pulse width modulation or pulse code modulation.

17. (Withdrawn) The integrated lighting module according to claim 1, wherein the drive and control system includes a switching converter operatively coupled to selected light-emitting elements of the one or more light-emitting elements, said switching converter providing a means for regulating current to the selected light-emitting elements based on a detected voltage drop across the selected light-emitting elements.

18. (Original) The integrated lighting module according to claim 1, wherein the drive and control system and the one or more light-emitting elements are mounted on a common thermally conductive substrate, wherein the thermal management system further provides a means for conducting heat away from the drive and control system.

19. (Withdrawn) The integrated lighting module according to claim 1, wherein the drive and control system is operatively connected to a user interface thereby providing a means for a user to modify the illumination generated by the integrated lighting module.

20. (Withdrawn) The integrated lighting module according to claim 1, wherein the optical system includes one or more optical elements configured to manipulate the illumination from the one or more light-emitting elements, wherein manipulation includes one or more of light extraction, light collection, light collimation and light mixing.

21. (Canceled)

22. (Withdrawn) The integrated lighting module according to claim 1, further comprising a communication system operatively connected to the drive and control system, said communication system enabling one or both of data input to the lighting module or data output from the lighting module.

23-24. (Canceled)

25. (Currently amended) The integrated lighting module of claim [[24]]1, wherein the thermal management system includes one or more thermosyphon devices.

26. (Canceled)